ABSTRACT OF THE DISCLOSURE

DISTRIBUTED NETWORK DATA STORAGE SYSTEM AND METHOD

The present invention is a system and method for distributed, highly scalable, wide area peer-to-peer network data storage. The functionally equivalent servers in the system are divided into groups. Each server maintains a dynamic list which is polled to determine the availability of the closest neighbor servers. Each server is switched between the groups of servers to optimize network connectivity parameters. Data and directory files are divided into a plurality of pieces which are stored on different servers. Files are uniformly and independently named, utilizing a tree with a common root, logical pathways, and unique file identifiers. When a server receives a client request for file system access, the plurality of file pieces are collected and sent to the client server from the neighbor servers simultaneously in order to optimize bandwidth. Servers with maximum throughput capacity are utilized for highest transmission speed and reduced processing time.